therefore very similar to that found in certain members of the genus *Hapalotis*, and particularly in *H. hirsutus*, Gould, of which the molars are almost identical in structure with those of the present species.

Dimensions of the type, an adult male in spirit:—

Head and body 83 millim.; tail 101; hind foot 22; ear 14; forearm and hand 25; head to front of last foot-pad 10·3; length of last foot-pad 2·4. Skull: basal length 24·6; greatest breadth 14·0; nasals, length 11·2; interorbital breadth 4·8; interparietal, length 5·0, breadth 8·3; length of outer wall of infraorbital foramen 3·1; palate, length 16·0, breadth outside $\frac{m.1}{}$ 5·9, inside $^{m.1}$ 3·0; diastema 7·9; length of anterior palatine foramina 5·5, of upper molar series 5·5.

Hab. South Australia.

Mus argurus has therefore the external characters and the skull of *Mus*, with the molars of *Hapalotis*; and I am somewhat in doubt as to which of the two it should be put into. It seems indeed probable that the characters of these two genera will be found so to blend together in the different species as to necessitate their ultimate union, notwithstanding the very striking characters presented by the more typical species of *Hapalotis*.

Pending a general revision of the Australian Muridæ, however, I refer the present new form to *Mus*, the differences in the teeth appearing not to be of very great systematic importance, while its external form, and especially the proportions of its hind feet, are wholly those of *Mus*, and in no way recall those of the Jerboa-like *Hapalotis*.

Of species already described none can be confounded with this, as, apart from its peculiar teeth, it is readily distinguished from all by its wholly white tail.

BIBLIOGRAPHICAL NOTICE.

Bulletin Scientifique de la France et de la Belgique. Publié par A. Giard. Tome xix. 8vo. Paris: Octave Doin, 1888.

In the year 1869 M. Alfred Giard, then Professor in the "Faculté des Sciences" at Lille, started a new periodical under the title of 'Bulletin Scientifique du Département du Nord et des Pays voisins."

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other cusps. That the internal cusp attached to the anterior lamina really belongs to it, and not to the second lamina, has always appeared to me far more natural, and the state of things in *Mus argurus* and in *Hapalotis* strongly supports this view.

This journal was more or less definitely connected with the Faculty of Sciences at Lille, although it by no means limited its work to the Department of the North or even to France; under the direction of Professor Giard it may be regarded specially as the exponent in France of Darwinistic ideas, which, at the time of its establishment, were by no means popular among French naturalists. For a long time, indeed, M. Giard was almost the only French zoologist of repute who adopted the heterodox English theory, and many of our readers will remember the rather contemptuous fashion in which the theory of Natural Selection was treated by some of the leaders of scientific opinion in France.

The 'Bulletin Scientifique,' however, managed to hold its own, and up to the end of the year 1887 eighteen volumes were published in the original form. They contained numerous valuable contributions, especially in the department of zoology, of some of which translations have appeared in this Journal; and the connexion of the Editor with the Marine Laboratory at Wimereux, near Boulogne, enabled him to furnish its pages with many articles upon the zoology of the shores of the Pas de Calais which are of special interest to British naturalists.

In the meantime Darwinistic views have gained ground to a considerable extent in France, and some few years ago M. Giard was appointed to a professorial position in Paris, where he has since continued his labours in teaching; and last year, on the completion of the second series of nine volumes of the original 'Bulletin,' this publication also made a fresh departure, and, while still retaining its connexion with the older journal, as indicated by the number of the volume, not only adopted the more ambitious title which stands at the head of this notice, but also enlarged the size of its pages and introduced a very liberal allowance of plates for the illustration of the papers occupying them. As the present volume is the first of a new and greatly improved series of this important periodical, we have thought it worth while to bring it under the notice of the readers of the 'Annals.'

When we look at the articles which it contains we cannot but feel that the regular contributors to this journal are following in the footsteps of Charles Darwin at least as closely as the naturalists of any other country. Not that they devote themselves particularly to the formal development of the idea of evolution, which they may not unjustly regard as placed above the reach of attack: but they rather, while working in the spirit of the theory, follow the example of their great leader by the prosecution of researches into the history of the organisms studied by them, less as things to be dissected and sectioned than as living entities, having functions to perform in nature and important relations to one another. In fact nearly all even of the descriptive papers in this volume are worked in this spirit.

As examples of this we may notice especially the descriptions of two new genera of Epicarides, *Probopyrus* and *Palæpyge*, by MM. Giard and Bonnier, an abstract of which appeared in our issue for

March 1888, M. E. Canu's paper on the free marine Copepoda of the Boulonnais, not yet completed (see 'Annals' for September 1888 and January 1889), and M. Bonnier's important memoir on the Galatheidæ of the French coasts ('Annals,' July 1888).

Of systematic articles of a more purely descriptive nature attention may be called particularly to a most valuable contribution by M. E. L. Trouessart and M. G. Neumann upon the plumicolous Sarcoptidæ, issued in continuation of a paper published in 1886 in the 'Bulletin de la Société d'études scientifiques d'Angers.' In this paper, which occupies fifty-six pages and is illustrated with six plates, M. Trouessart describes a great number of those curious parasitic mites which inhabit the plumage of birds—objects small and apparently contemptible in themselves, but presenting the most singular varieties of adaptive structure.

M. Bétencourt's list of the hydroid polyps of the Pas de Calais, although only a list with remarks upon the mode of occurrence &c. of the species, is a valuable contribution to our knowledge, and will be particularly interesting to British naturalists; and the same observations apply to Dr. Sauvage's "Catalogue of the Fishes of the Coast of the Boulonnais," reprinted from the 'Bulletin de la Société Zoologique de France,' but supplemented with numerous notes by M. Giard. In like manner M. Giard's notice of the faunistic work done during the year 1888 at the Laboratory of Wimereux contains a quantity of interesting matter in connexion with the distribution and mode of occurrence of numerous species of animals, including many which are of interest to us as inhabitants of our own coasts.

M. Giard's article on Parasitic Castration contains some new points observed by himself, and, further, a discussion of the observations of Mr. Fewkes on the castration of *Amphiura squamata* by a Copepod Crustacean parasite. M. Giard notices further the castration of this species at Wimereux by Orthonectida; and he concludes his article with a series of numbered "theses," giving an aphoristic definition of the phenomena included under the term "parasitic castration." We find further notices upon this and other matters of biological interest, both zoological and botanical, in the articles contributed by M. Giard under the title of "Fragments biologiques." Two or three extracted and translated articles are also of much interest from the point of view of general biology. Among these we may notice translations of papers by MM. Weismann and Ischikawa on partial fecundation, one by M. Huth on developmental convergence in the animal and vegetable kingdoms, and an abstract by M. Giard of a memoir by M. Maurice Hovelacque on the vegetative apparatus of the Bignoniaceæ, Rhinanthaceæ, Orobancheæ, and Utricularieæ, furnishing a very remarkable indication of the singular adaptations which the members of a group may undergo to suit them to very different conditions of existence.

A very curious paper from a Russian source is that by M. J. Krassilstchik on "The industrial production of vegetable parasites for the destruction of injurious insects." In this the author notices

the well-known fact that great numbers of insects, injurious and otherwise, are constantly being destroyed by the action of parasitic Fungi, the mode of operation of which he describes very clearly, and he refers to various naturalists who entertained the notion that something might be done for the destruction of insects injurious to agriculture by favouring the propagation of these insidious enemies. The first who attempted to realize this idea appears to have been the Russian naturalist Metschnikoff, and on his being prevented by other work from continuing his researches in this direction M. Krassilstchik undertook to carry on the work. He notices the difficulties which stand in the way of the successful prosecution of this curious cultivation, and indicates, but only in general terms, how these were overcome, so that he is able to estimate that the quantity of spores of at all events one species, *Isaria destructor*, which is particularly destructive to *Cleonus punctiventris*, itself a special enemy of the beet, necessary for the infection of 1 hectare (=about 2½ acres) will cost only 10 francs. The spores are spread over the fields either along with the manure or mixed with sand, and in experimental "sowings" of this kind very distinct epidemics of the parasites were produced, amounting in ten days or a fortnight to from 55 to 80 per cent. of the insects.

In Palæontology we find an important note by M. Dollo on the cranium of the Mosasauridæ, illustrated with several woodcuts of parts of the skull and with a large plate containing figures of the crania of *Mosasaurus* and *Hainosaurus*, and, further, an article by the same author on the signification of the pendent trochanter in Dinosaurs.

Of course in a notice such as this it is impossible either to enumerate all the articles contained in the volume or to give more than a passing reference to those which are mentioned, and with the exception of M. Krassilstchik's paper we have done little more than indicate the titles. Nevertheless we hope that we have said enough to show that the 'Bulletin Scientifique' in its new form promises to play an important part in the advancement of Natural History, and that the reader may expect to find throughout its pages much sound and useful information.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

March 20, 1889.—W. T. Blanford, LL.D., F.R.S., President, in the Chair.

The following communication was read:—

"Note on the Pelvis of *Ornithopsis*." By Prof. H. G. Seeley, F.R.S., F.G.S.

The remains preserved in Mr. Leeds's collection at Eyebury, and described by Mr. Hulke, are the largest and most perfect pelvic